# SystemC CCI WG
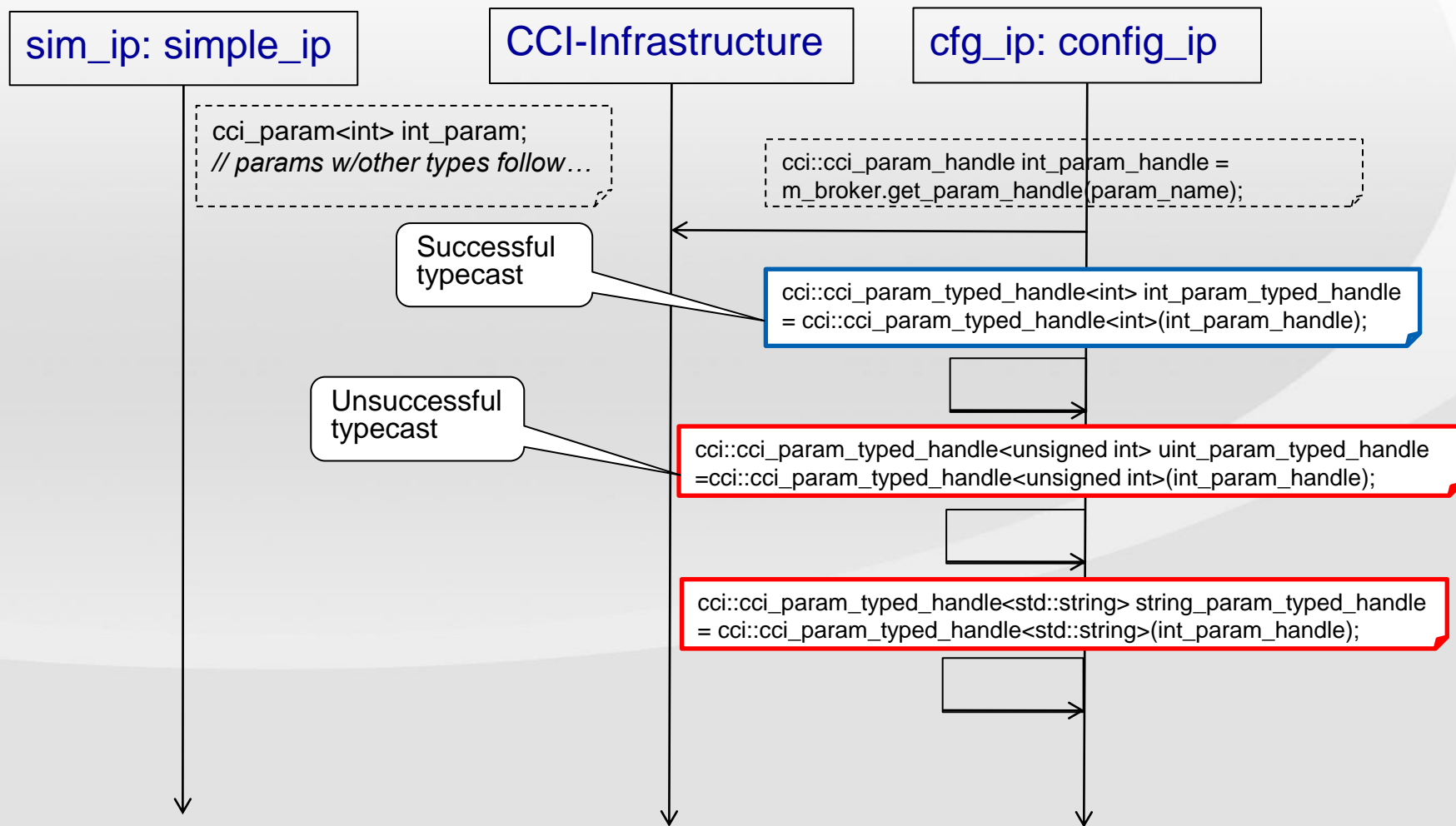# Using CCI Parameters of Fully Supported Data Types

A. Nizamudheen, Texas Instruments Inc.

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# Example Overview

- **Declare, initialize and report the value of a parameter of each fully supported data type**

  - bool

  - char, unsigned char

  - int, unsigned int, short int, int64_t

  - float, double

  - std::string

- **Demonstrate (successful and unsuccessful) conversion of an untyped handle to a typed handle**

  - Get untyped handle to int-param and try to cast it to typed handle

    - int-param

    - unsigned int-param

    - std::string-param

# Sequence Diagram

sim_ip: simple_ip

CCI-Infrastructure

cfg_ip: config_ip

cci_param<int> int_param;
*// params w/other types follow…*

cci::cci_param_handle int_param_handle =
m_broker.get_param_handle(param_name);

Successful typecast

cci::cci_param_typed_handle<int> int_param_typed_handle
= cci::cci_param_typed_handle<int>(int_param_handle);

Unsuccessful typecast

cci::cci_param_typed_handle<unsigned int> uint_param_typed_handle
=cci::cci_param_typed_handle<unsigned int>(int_param_handle);

cci::cci_param_typed_handle<std::string> string_param_typed_handle
= cci::cci_param_typed_handle<std::string>(int_param_handle);

*accellera*
SYSTEMS INITIATIVE

# Expected Output
## (ex02_Fully_Supported_Data_Type_Param.log)

```
SystemC Simulation

Info: sim_ip: @0 s, @Ctor: Default value of sim_ip.bool_param is 1

Info: sim_ip: @0 s, @Ctor: Default value of sim_ip.char_param is A

Info: sim_ip: @0 s, @Ctor: Default value of sim_ip.uchar_param is U

Info: sim_ip: @0 s, @Ctor: Default value of sim_ip.int_param is -1

Info: sim_ip: @0 s, @Ctor: Default value of sim_ip.uint_param is 0xfeedf00d

Info: sim_ip: @0 s, @Ctor: Default value of sim_ip.int16_param is 0x1234

Info: sim_ip: @0 s, @Ctor: Default value of sim_ip.int64_param is 0x976543210

Info: sim_ip: @0 s, @Ctor: Default value of sim_ip.float_param is 3.14

Info: sim_ip: @0 s, @Ctor: Default value of sim_ip.double_param is 2.714

Info: sim_ip: @0 s, @Ctor: Default value of sim_ip.string_param is C++ String

Info: sc_main: Begin Simulation.

Info: cfg_ip: @10 ns, @execute: Type of sim_ip.int_param is an integer.

Info: cfg_ip: @10 ns, @execute: Typecast of sim_ip.int_param to
cci::cci_param_typed_handle<int> succeeded

Info: cfg_ip: @10 ns, @execute: Current value of sim_ip.int_param is -1
```

# Cont'd

Warning: cfg_ip: @10 ns, @execute: Typecast of sim_ip.int_param to cci::cci_param_typed_handle<unsigned int> failed.
In file: <removed by verify.pl>
In process: cfg_ip.execute @ 10 ns

Warning: cfg_ip: @10 ns, @execute: Typecast of sim_ip.int_param to cci::cci_param_typed_handle<std::string> failed.
In file: <removed by verify.pl>
In process: cfg_ip.execute @ 10 ns

Info: sc_main: End Simulation.